

REMARKS

Applicant requests reconsideration and re-examination of the above-identified application in view of the arguments and amendments made to the claims. The following remarks state Applicant's bases for making this request and are organized according to the Examiner's Action.

Claims 1-11, 14, 17-20, 22-25, 29, 31, 32, 35 and 36 are pending, and Applicant is canceling herein Claims 8-11, 19, 22, 23 and 36.

DRAWINGS

1. The Office Action states that the drawings are objected to under 37 CFR 1.83(a) and that the drawings must show every feature of the invention specified in the claims. Therefore, the features 8-11, 19, and 36 must be shown or the feature(s) canceled from the claim(s). Applicant has decided to cancel Claims 8-11, 19 and 36.

2,3. The Office Action states that Claims 1, 3, 6, 7, 14, 22, 24, 25, 29, 31 and 32 under 35 U.S.C. 103(a) as being unpatentable over Cole et al (6987233) in view of Hoehne et al (7060922). The Office Action states that Cole et al disclosed in the figures a push button assembly comprising a housing 36 with an open end thereto bounded by a flange structure 26, the housing being insertable through an aperture in a panel 22 with the flange on an outer side thereof; a fixing means 38,30 for fixing the housing relative to the panel beneath the panel; a push button 24 movably mounted within the open end and flange structure; a lamp 70 mountable relative to the housing for operation by movement of the button via actuating structure 52 disposed between the button and the switch within the housing,

characterized in the lamp and the switch are mounted within the housing so that at least a part of the lamp and switch is located within the confines of the housing and wherein the switch comprises a rectangular body with an upwardly projecting actuator 84 and connection terminals 86. The housing provides abutments for supporting the actuating structure. At least one of the sidewall structures is generally open to provide access to the interior of the housing. The flange structure has outwardly inclined side walls which taper towards the top free end of the housing. The housing provides electrostatic protection to any circuitry within the housing and wherein the protection comprises grounding members integrated into the housing to discharge any introduced electrical charges. The actuator includes a centrally disposed aperture and elongated legs 54 with outwardly turned feet 56 projecting from the center of opposed bottom wall edges. The body overlies the inner side wall structures within the confines of the housing and the terminals projecting out of the housing. The switch is a microswitch. The lamp is disposed in the center of the housing mounted on a rectangular strip with connector terminals. The lamp strip and the switch body are separate components. The body and the light snap onto a part of the housing and is held in place by pegs passing through the body of the switch.

The Office Action then states that Cole et al does not disclose that a major part of the switch and lamp within the housing.

The Office Action then states that Hoehne et al teaches a push button assembly including a housing structure with a flange in which a majority of the switch 30 and the lamp are disposed. The spring 38 is fixed across the frame to provide relative movement of the button within the flange structure.

The Office action then states that it would have been obvious to one of ordinary skill in the art to apply the teachings of Hoehne et al to Cole et al to form the housing such that the housing encloses a major portion of both the switch and the lamp with a portion for access and include a spring for biasing the actuator within the housing because this is for the purpose of protecting the switch and lamp from exposure to contaminants and dirt both as assembled and prior to installation into the panel.

Applicant is amending Claim 1 to more particularly point out and distinctly claim the subject matter which applicant regards as his invention. In particular, Applicant is amending Claim 1 to include the limitation in Claims 22 and 23 wherein Claim 1 now calls for:

"... characterized in that the lamp and the switch are mounted within the housing so that at least a major part of the lamp and the switch is located within the confines of the housing and wherein the switch is a microswitch comprising a rectangular body with an upwardly projecting actuator and connection terminals and the rectangular body overlies the inner side wall structures within the confines of the housing and the connection terminals project out of said housing."

Applicant points out that Claim 1 as amended now requires that the body 19 of the switch 20 overlies the inner side wall structure 16 within the confines of housing 1. As such, the switch 20 is largely confined within the housing 2. This provides a particularly compact and robust arrangement for a push button switch.

When one looks to the disclosure of Cole et al (US 6,987,233), it is abundantly clear from consideration of the

figures (especially figure 1) that the body of the switch 34 does not overlies in the side walls 38 of the housing 26. In contrast, in the arrangement of Cole, the body of the switch 34 lies outside of and below the housing of 26. More particularly, the switch 34 is retained in position by means of a switch mounting arrangement, as set out at column 6, lines 6 to 7 of Cole, "extends below the main portion of the lamp switch mount". This is a clearly different, less compact and less robust arrangement than that required by amended Claim 1 of the present invention.

Referring now to Hoehne et al (US 7,060,922), this document discloses a push button incorporating an organic light emitting diode (OLED) screen rather than a lamp. Additionally, Hoehne does not comprise a single housing. Instead it comprises a button housing 12 and a separate switch housing 14. The button housing 12 is adapted to have a section projecting above a surface and means to facilitate mounting of the push button to a surface. The switch housing 14 is a separate component which is fixed to the button housing 12 in an essentially linear axial relationship. As such, Hoehne does not teach providing a single integral housing for the button and the switch as required by the present invention. Nor does it teach the provision of the switch within the same housing as the button and overlying the side walls of the housing. Indeed, the teaching of Hoehne in relation to the axial relationship of the button housing 12 and the switching housing 14 teaches strongly away from a compact single housing containing both button and switch.

Therefore, Applicant believes that Cole et al. in view of Hoehne et al. in combination actually teach away from the present invention, i.e., Cole teaches the switch 34 lies outside or below the housing 26, and Hoehne teaches a separate

switch housing 14 attached to a button housing 12, wherein the present invention teaches a single integral housing for the button 1 and switch 20 with the body of the switch 20 overlying the inner side wall structure within the confines of the housing. Applicant believes that Claim 1 is not obvious from the two cited references, and Claim 1 as amended is patentable. Claims 3, 6, 7, 14, 24, 25, 29, 31 and 32 are dependent on Claim 1, either directly or indirectly, and likewise, these dependent Claims are nonobvious and patentable. Claims 22 and 23 are cancelled.

4. The Office Action states that Claims 2, 4, 17-20, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cole et al (6987233) in view of Hoehne et al (7060922) as applied to claims 1, 2, 6, 7, 14, 22, 24, 25, 29, 31 and 32 above, and further in view of Ichimaru (7702092).

The Office Action also states that Cole et al as modified by Hoehne et al teach all of the claimed limitations with the exception of the housing having a generally square frame structure, clips on the housing for mounting in the panel, and that the flange is opaque. The Office Action further states that Ichimaru teaches a push button assembly including a housing with a substantially square frame with clips for mounting in the panel and the flange of the illuminated switch is opaque. The Office Action states that it would have been obvious to one of ordinary skill in the art to utilize the teachings of Ichimaru to Cole et al as modified by Hoehne et al to form the frame in a square shape with clips for mounting in the panel because this is for the purpose of ensuring a fixed mounting while preventing rotation of the housing within the panel while making the flange opaque while the button is illuminated will not alter the visibility of the switch within the panel.

As described in paragraph 3 above, Applicant has amended independent Claim 1 to more particularly point out and distinctly claim the subject matter of his invention as described in Paragraph 3, and Applicant believes that Claim 1 (as amended) is now nonobvious and patentable for the reasons discussed in paragraph 3. Ichimaru discloses a latch with a switch and the latch is formed of a box-like housing 11 recited in dependent Claim 2, the housing 2 of the present invention has a general open square frame structure 18. Although that is a feature of the present invention, it is not the distinguishing feature as described in Claim 1. However, Claims 2, 4, 17, 18, 20 and 35 are dependent on Claim 1, either directly or indirectly, and therefore are likewise patentable over the teachings of Cole et al. in view of Hoehne and further in view of Ichimaru. Claim 19 is cancelled.

5. The Office Action states that Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cole et al in view of Hoehne et al and Ichimaru as applied to claims 1-4, 6, 7, 14, 17-20, 29, 31, 32, and 35 above, and further in view of Wurz et al (6102394). The Office action also states that Cole et al as modified by Hoehne et al and Ichimura teaches all of the claimed limitations with the exception of the frame structure is shorter in axial length than the horizontal length of each of the side wall structures. The Office Action states that Wurz et al teaches a pushbutton structure in which the frame structure is shorter in axial length than the horizontal length of each of the side wall structures and that it would have been obvious to one of ordinary skill in the art to apply the teachings of Wurz et al to Cole et al as modified by Hoehne et al and Ichimura to form the housing with these dimensions because this is for reducing the depth necessary to mount the switch within the panel.

As described in paragraph 3 above, Applicant has amended independent Claim 1 to more particularly point out and distinctly claim the subject matter of his invention as described in paragraph 3, and Applicant believes that Claim 1 (as amended) is now patentable for the reasons discussed in paragraph 3. Claim 1 now recites the distinguishing feature of the present invention. Wurz may have as the Examiner states a frame structure that is shorter in axial length than the horizontal length of each of the side wall structures, but it requires assembly within two large pointed circuit boards 46, 48 and teaches away from the present invention. The present invention teaches an integral, stand alone, push button switch assembly not dependent on assembly within a pair of printed circuit boards for receiving and mounting of the switch assembly. Claim 5 calls for the frame structure to be shorter in axial length than the horizontal length of each of the side wall structures in a stand alone push button switch. However, Claim 5 is dependent on Claim 1 which is believed to be nonobvious and patentable and therefore, Claim 5 is likewise nonobvious and patentable over the teachings of Cole et al. in view of Hoehne et al. and Ichimaru, and further in view of Wurz.

In view of the above, it is submitted that Claims 1-7, 14, 17, 18, 20, 24, 25, 29, 31, 32, and 35, as amended, are now in condition for allowance. Reconsideration of the rejections to the above claims is respectfully requested. Accordingly, it is requested that the foregoing amendment be entered and the case sent to issue.

If there are any questions, we urge the Examiner to call us. Please charge any additional costs or credit any overpayments in connection with this document to our Deposit Account No. 16-0875.

Respectfully Submitted,  
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